Remarks

The Examiner has objected to the drawings on the ground that relative dimensions of thread sets recited in Claim 39 are not shown. Clearly Claim 39 and original Claim 19 recite the relative diameters. The specification and Figure 2 have been amended to clearly show and describe the correspondence of the diameter and pitch of the female screwthread of the attachment portion and the diameter and pitch of the female screwthread at the end of the valve body. Since the embodiment of original Claim 39 is merely incorporated into the specification and drawings, no new matter has been added and no new issues are raised.

The Examiner has rejected Claim 38 under 35 U.S.C. 112 for lack of enablement. With due respect to the Examiner, there is no lack of enablement. There is apparently some confusion on the part of the Examiner. The "attachment portion" is well defined as an extension attached to the discharge valve. It does not attach to the pressure cylinder but rather passes through the screwthread of the pressure cylinder to the inside of the cylinder. The valve attaches to the pressure cylinder by means of a valve thread having a larger outside diameter than the outside diameter of the attachment portion, e.g. thread 6 in Figure 2.

The Examiner has also rejected Claims 20-25 and 34-36 under 35 U.S.C. 103 as being unpatentable over U.S. Patent 5,305,794 to George or U.S. Patent 4,611,628 to Pasternack. This rejection should be withdrawn.

The common purpose for restriction paths is to provide pressure attenuation within the valve itself in order to extract gas, held at a high pressure within a vessel, at a low pressure. The discharge valve itself thus provides most of the attenuation. This leads to the serious problem

that if liquid gas enters the valve, e.g. by inversion of the container, liquid gas reaches the low pressure side of the valve which is not designed to withstand the resulting high pressure and further, liquid gas can pass through the valve in liquid form. It has now been discovered that if a flow resistance is provided before and independently of the valve opening, of at least 1 bar under the conditions set out in the pending claims, the resulting high pressure drop prevents liquid gas from entering the low pressure side of the valve.

According to the Examiner, "George shows a pressure cylinder with an external valve 6 and a fill valve 27 that has an always open restriction path 18, 22 for outflow of fluid." The George patent is directed to a valve assembly that provides for fast filling and slower discharge. A large pressure drop to the outlet valve is not needed for that purpose. There is no way that George discloses or suggests a restriction path providing a pressure drop of at least 1 bar independently of the valve opening under the conditions of the present claims. Further there is no disclosure or suggestion as to why one would wish to design such a restriction path having such a high pressure drop. The Examiner's statement that it "would have been obvious" is entirely unsupported by the Examiner. Why would one wish to make such a design? The only reason for doing so must be obtained from the teachings of the present application using impermissible hindsight. One skilled in the art can design almost anything but unless the existing art provides some reasonable purpose for doing so, such design would be mere wasted energy from amongst trillions of other possible designs having no reasonable purpose. Such a state of the art does not render a purposeful design obvious to one skilled in the art.

The Pasternack reference similarly gives no "reason" for designing a restriction path so as to provide a pressure drop as high as 1 bar and is subject to exactly the same defects as George. Pasternack is concerned with evening out pressure fluctuations in using gas to operate equipment, not a continuous pressure drop to prevent the flow high pressure liquid gas in situations where liquid gas can reach the outlet from the high pressure source. The rejection should be withdrawn.

The Examiner has also rejected claims 20-23 and 26-30 under 35 U.S.C. 103 as being unpatentable over U.S. Patent 4,142,652 to Platt. This rejection should also be withdrawn. There is absolutely nothing in Platt suggesting a restriction path providing a pressure drop of at least 1 bar independently of the valve opening. The mere fact that a sintered flow resistance is provided does not suggest that there is a pressure drop of at least 1 bar to prevent liquid from entering the low pressure side of the valve and in fact Platt specifically says that liquid passes through the valve and thus cannot possibly provide the required pressure drop of the present invention nor suggest such a structure.

The Examiner has also rejected claims 35 and 39 over German patent publication DE2406313 to Mays. There is simply no suggestion in this reference with respect to a pressure drop of at least 1 bar in a flow passage independently of the valve opening as required by the present claims. The rejection should be withdrawn.

Claims 37-39 have been rejected under 35 U.S.C. 103 as being unpatentable over Pasternack. Claims 37-39 are ultimately dependent upon Claim 35 and are patentable over the

Pasternack patent for the reasons previously given. The rejection should therefore also be withdrawn.

Claims 31-33 have been rejected under 35 U.S.C. 103 as being unpatentable over Pasternack in view of Szwargulski. Szwargulski does not cure the critical defects of the Pasternack patent previously discussed. Pasternack does not disclose or suggest structure for creating a pressure drop of at least 1 bar independently of the valve opening and neither does Szwargulski. Further neither reference nor their combination suggest any reason for doing so. The rejection should be withdrawn.

In view of the foregoing, is asserted that all objections and rejections have been overcome and all claims are in condition for allowance, which action is courteously requested.

Respectfully submitted,

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cc: Weber, et al.